

What is Claimed is:

1. A system for providing a network adapter for one or more access points in a local area network environment, comprising:

means for connecting said one or more access points to a wired network;

means for connecting said one or more access points to a wireless network;

means for enforcing a managed network environment; and

means for communicating with a network control server.

2. A system as recited in claim 1, wherein said means for connecting to a wired network further comprises a wireline network interface.

3. A system as recited in claim 1, wherein said means for connecting to a wireless network further comprises a wireless network interface.

4. A system as recited in claim 3 wherein said wireless network interface is coupled to a wireless access point.

5. A system as recited in claim 4 wherein said wireless access point further comprises an 802.11 type access point.

6. A system as recited in claim 4 wherein said wireless access point further comprises a Bluetooth-type access point.

7. A system as claimed in claim 3 wherein said wireless network interface is coupled to a Local Area Network (LAN) port.

8. A system as recited in claim 1 wherein said means for enforcing a managed network environment further comprises an augmented IP stack.

9. A system as recited in claim 8 wherein said augmented IP stack includes a Mobile IP Foreign Agent.

10. A system as recited in claim 8 wherein said augmented IP stack detects and handles packets corresponding to a plurality of network services.

11. A system as recited in claim 1 wherein said means for communicating with a plurality of Network Control Servers further comprises a network coordination software.

12. A system as recited in claim 1 wherein said network adapter includes a plurality of wireline network interfaces.

13. A system as recited in claim 1 wherein said network adapter includes a plurality of wireless network interfaces.

14. A system as recited in claim 1 wherein said network adapter is coupled to a switch and said switch is coupled to a plurality of short-range wireless access points.

15. A system as recited in claim 14 wherein said switch is programmable to automatically forward all inbound packets from wireless access point LAN segments to a segment containing said network adapter.

16. A system as recited in claim 14 wherein said switch is programmable to automatically forward all packets not

originating from the LAN segment containing the adapter and destined to an access point segment, to the segment containing said network adapter.

17. A system as recited in claim 14 wherein the access points or the wireless clients are programmed to forward all packets to the said network adapter.

18. A system as recited in claim 1 wherein said Network Control Server is co-located with said network adapter.

19. A system as recited in claim 1 wherein said Network Control Server is co-located with a Core Server.

20. A system as recited in claim 1 wherein said Network Control Server is co-located with a Routing Coordinator.

21. A system as recited in claim 1 wherein said network adapter further comprises at least one of a stand-alone personal computer (PC) and a special purpose computing machine.

22. A system as recited in claim 1 wherein said network adapter further comprises software stored within said one or more access points.

23. A system as recited in claim 1 wherein said Network Control Sever is distributed over said network.

24. A system as recited in claim 1 wherein said network adapter is connectable to one or more access points located on a plurality of LAN segments.

25. A system as recited in claim 1 wherein said network adapter is connectable to different wireless LANs.

26. A system as recited in claim 1 wherein said network adapter is co-located with at least one of a Handoff Management Point, a Home Address Masquerader and a Foreign Address Masquerader.

27. A method for providing a network adapter for a plurality of access points in a local area network environment, comprising the steps of:

connecting said access points to a wired network;
connecting said access points to a wireless network;
enforcing a managed network environment; and
communicating with a Network Control Server.

28. A method as recited in claim 27 wherein the step of enforcing a managed network environment further comprises the steps of:

receiving packets from a wireline network;
processing said packets through an augmented IP stack;
determining whether to rewrite said packets; and
forwarding said packets to said wireless network.

29. A method as recited in claim 28, further comprising, prior to the step of forwarding said packets to said wireless network, the step of determining whether to filter said packets.

30. A method as recited in claim 27 wherein the step of enforcing a managed network environment further comprises the steps of:

receiving packets from a wireless network;
processing said packets through an augmented IP stack; and
forwarding said packets to a wireline network.

31. A method as recited in claim 30, wherein said step of processing further comprises, prior to the step of forwarding, the steps of:

determining whether to filter said packets; and
determining whether to rewrite said packets.

32. A method as recited in claim 31, further comprising the steps of:

detecting packets corresponding to a plurality of network services via said augmented IP stack; and
handling said packets.

33. A method as recited in claim 27, further comprising the step of determining an access point currently associated with a mobile client by inspecting a MAC address associated with packets transmitted by a mobile client.